

What is claimed is:

1. A fiber reinforced plastic pipe reduced in thickness and increased in diameter by pultrusion process, comprising
  - a fiber bundle spun and aligned in a longitudinal direction, and
  - circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer thereof.
2. A fiber reinforced plastic pipe reduced in thickness and increased in diameter by pultrusion process, comprising
  - a fiber bundle spun and aligned in a longitudinal direction, and
  - circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer thereof, wherein
  - 20 the pipe has a slit, capable of being reduced in diameter along the circumference, provided in the longitudinal direction, such that said fiber reinforced plastic pipe can be inserted into a metal pipe.
- 25 3. The fiber reinforced plastic pipe according to

claim 1 or 2, wherein

a tensile elasticity of fibers forming said fiber bundle is 196GPa or more.

5 4. The fiber reinforced plastic pipe according to

claim 1 or 2, wherein

a tensile elasticity of fibers forming said circumferential reinforced fiber sheet is 58.8GPa or more.

10 5. The fiber reinforced plastic pipe according to

claim 1 or 2, wherein

a basis weight (FAW) of said circumferential reinforced fiber sheet is in the range of 100g/m<sup>2</sup> to 600g/m<sup>2</sup>.

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6. The fiber reinforced plastic pipe according to

claim 1 or 2, wherein

a thickness of said circumferential reinforced fiber sheet is in the range of 0.05mm to 1.0mm.

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7. A power transmission shaft comprising a metal joint element and a metal pipe jointed to each other, wherein

the shaft further comprises a fiber reinforced plastic pipe inserted into said metal pipe, said fiber

reinforced plastic pipe being reduced in thickness and increased in diameter by pultrusion process, comprising a fiber bundle spun and aligned in a longitudinal direction, and circumferential reinforced fiber sheet provided at 5 least either on an outer surface layer or on an inner surface layer thereof.

8. A power transmission shaft comprising a metal joint element and a metal pipe jointed to each other,

10 wherein

the shaft further comprises a fiber reinforced plastic pipe inserted into said metal pipe, said fiber reinforced plastic pipe being reduced in thickness and increased in diameter by pultrusion process, comprising a 15 fiber bundle spun and aligned in a longitudinal direction, and circumferential reinforced fiber sheet provided at least either on an outer surface layer or on an inner surface layer, the pipe having a slit, capable of being reduced in diameter along the circumference, provided in 20 the longitudinal direction.

9. The power transmission shaft according to claim 8, wherein the slit has a width of 0.01% or more and 40% or less of the outer circumference thereof in a natural state.

10. The power transmission shaft according to claim 8 or 9, wherein said slit has a bias angle within  $\pm 30$  degrees with respect to an axial direction of said fiber reinforced plastic pipe.

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11. The power transmission shaft according to claim 8, wherein a value of  $D_1/D_2$  is greater than 1 and equal to 1.3 or less, where  $D_1$  is an outer diameter of said fiber reinforced plastic pipe and  $D_2$  is an inner diameter of said metal pipe.

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10 12. The power transmission shaft according to claim 7 or 8, wherein a tensile elasticity of fibers forming said fiber 15 bundle is 196GPa or more.

13. The power transmission shaft according to claim 7 or 8, wherein a tensile elasticity of fibers forming said 20 circumferential reinforced fiber sheet is 58.8GPa or more.

14. The power transmission shaft according to claim 7 or 8, wherein a basis weight (FAW) of said circumferential 25 reinforced fiber sheet is in the range of 100g/m<sup>2</sup> to

600g/m<sup>2</sup>.

15. The power transmission shaft according to claim 7  
or 8, wherein

5 a thickness of said circumferential reinforced fiber  
sheet is in the range of 0.05mm to 1.0mm.

16. The power transmission shaft according to claim 7  
or 8, wherein

10 said fiber reinforced plastic pipe has a layered  
structure of 20 layers or less.

17. The power transmission shaft according to claim 7  
or 8, wherein

15 a value of  $FL/PL$  is 0.1 or more and 1.0 or less,  
where  $PL$  is a length of said metal pipe and  $FL$  is a length  
of said fiber reinforced plastic pipe.

18. The power transmission shaft according to claim 7  
20 or 8, wherein

a value of  $t_2/t_1$  is 0.01 or more and 10 or less,  
where  $t_1$  is a thickness of said metal pipe and  $t_2$  is a  
thickness of said fiber reinforced plastic pipe.

25 19. The power transmission shaft according to claim 7

or 8, wherein

5        said fiber reinforced plastic pipe is fixed to said metal pipe by reducing said metal pipe in diameter along the outer circumference by plastic-working, with said fiber reinforced plastic pipe being inserted in said metal pipe.

20. The power transmission shaft according to claim 7 or 8, wherein

10        said fiber reinforced plastic pipe is fixed to said metal pipe with an adhesive.

21. The power transmission shaft according to claim 20, wherein

15        a recessed portion for accommodating adhesive is provided at least on any one of an outer circumference of said fiber reinforced plastic pipe or an inner circumference of said metal pipe.